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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/660,240	09/11/2003	John P. Miller	F-631	5334
7590	09/09/2004			
Pitney Bowes Inc. Intellectual Property and Technology Law Dept. 35 Waterview Drive P.O. Box 3000 Shelton, CT 06484			EXAMINER KOCH, GEORGE R	
			ART UNIT	PAPER NUMBER
			1734	
DATE MAILED: 09/09/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/660,240	Applicant(s) MILLER ET AL.	
	Examiner George R. Koch III	Art Unit 1734	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) 12-15 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16-24 is/are allowed.
- 6) ☒ Claim(s) 1-3, 4-11, 25-27 is/are rejected.
- 7) ☒ Claim(s) 4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>09/23, 11/24/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of group I, claims 1-11 and 16-25 in the reply filed on 8/9/2004 is acknowledged. It is noted that the application includes claims 26 and 27 as well, which are dependent on claim 25 and are included in group I. Thus group I actually comprises claims 1-11 and 16-27.

The traversal is on the ground(s) that there is no burden. This is not found persuasive because the apparatus is not required to perform the claimed method. For example, the apparatus of claims 1-11 and 16-25 can also be used as an adhesive dispensing device which glues sheets of paper together. The method requires a search and analysis of art in the envelope flap field. Therefore, the search and analysis of the two groups is distinct, and a search burden exists for the USPTO with regard to both groups.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 1734

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claim 8-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Gregoire (US 2003/0136337 A1).

As to claim 8, Gregoire discloses means defining an envelope flap feed path (for example, the deck shown in Figure 4), means for moving (for example, items 28B, see paragraph 0016) the envelope flap along the envelope flap feed path with the flap in a substantially horizontal orientation, and spray moistening means (items 48, and see paragraphs 0017-0020) disposed adjacent said envelope flap feed path and capable of spraying moisture in a substantially vertical direction in strip segments to a gummed surface of the envelope flap as the envelope flap moves past the moistening means. These moistening means can apply moisture to the envelope flap in tiered segmented strips (for example, segments extending the entire length of the flap) so as to cover substantially most of the gummed surface of the envelope flap with moisture. Furthermore, the angle of 10 to 20% cited (see paragraph 0018) is considered to result in a flap position that is substantially horizontal and a spray direction that is substantially vertical.

As to claim 9, Gregoire discloses that the nozzles are above the gummed portion. Therefore, Gregoire sprays in a substantially vertical direction that is a substantially downward direction.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 1, 2, 6, 7 and 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gregoire (US 2003/0136337 A1) in view of Lupkas (US Patent 3,911,862).

As to claim 1, Gregoire discloses a device for moistening an envelope flap of an envelope (for example, see figures 1-3) comprising:

means defining an envelope feed path (the deck shown in Figure 4);

a plate (item 18) disposed adjacent said envelope feed path, said plate being positioned such that said plate passes between said envelope flap and a body of said envelope as said envelope is transported along said envelope feed path, said envelope flap facing a firstside of the plate;

a reservoir containing an envelope flap moistening fluid (item 34);
a plurality of orifices (items 48) formed in said first side of said plate for discharging moistening fluid received from said reservoir.

Gregoire does not disclose valve means connected between said reservoir and said orifices for selectively supplying each of the orifices with moistening fluid from said reservoir; or flap sensing means disposed adjacent said envelope feed path for sensing an edge portion of said envelope flap, and operatively connected to said valve means for supplying signals to said valve means for selectively actuating said valve means to selectively supply moistening fluid to said orifices in response to the sensing of the edge portion of said envelope flap.

However, Lupkas discloses the concept of valve means (Figure 1a, item 32) connected between a reservoir (item 29) and said orifices (items 27 and 28) for selectively supplying each of the orifices with moistening fluid from said reservoir; and flap sensing means (items 23-24) disposed adjacent said envelope feed path for sensing an edge portion of said envelope flap, and operatively connected to said valve means (via control circuit 36) for supplying signals to said valve means for selectively actuating said valve means to selectively supply moistening fluid to said orifices in response to the sensing of the edge portion of said envelope flap. Lupkas discloses that the addition of these sensors and valve structures enables the gummed portion of the flap to be substantially completely moistened and eliminates the need for a nozzle to follow the intricate contour of the flap. One in the art would also immediately appreciate that switching between nozzles based on positioning of the flap would reduce

moistening fluid used, by eliminating the activation of nozzles/orifices that are not adjacent to a gummed portion of the flap. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have utilized the valve and sensing means of Lupkas in the device of Gregoire in order to reduce the amount of moistening fluid used.

As to claim 2, both Gregoire (see Figure 3) and Lupkas (the embodiment in Figure 1a) disclose that the orifices are arranged in a first substantially linear array.

As to claim 6, Gregoire discloses that the plate (item 30) is substantially horizontal, and that the moistening fluid is discharged in a downward direction. The angle of 10 to 20° cited (see paragraph 0018) is considered to result in a flap position that is substantially horizontal and a spray direction that is substantially vertically downward.

As to claim 7, Gregoire discloses that the angle formed by the envelope flap and the body of the envelope to allow the plate to pass between the envelope flap and the body is approximately 30 degrees or less. Gregoire discloses an optimal range of 10 to 20 degrees, preferably 15 degrees (see paragraph 0018).

As to claim 25, Gregoire discloses a mailing machine (for example, see figures 1-3) comprising:

- an envelope feed path (the deck shown in Figure 4);
- a moistening device disposed along the feed path (

a plate (item 18) disposed adjacent said envelope feed path, said plate being positioned such that said plate passes between said envelope flap and a body of said envelope as said envelope is transported along said envelope feed path, said envelope flap facing a firstside of the plate;

a reservoir containing an envelope flap moistening fluid (item 34);

a plurality of orifices (items 48) formed in said first side of said plate for discharging moistening fluid received from said reservoir.

Gregoire does not disclose valve means connected between said reservoir and said orifices for selectively supplying each of the orifices with moistening fluid from said reservoir; or flap sensing means disposed adjacent said envelope feed path for sensing an edge portion of said envelope flap, and operatively connected to said valve means for supplying signals to said valve means for selectively actuating said valve means to selectively supply moistening fluid to said orifices in response to the sensing of the edge portion of said envelope flap.

However, Lupkas discloses the concept of valve means (Figure 1a, item 32) connected between a reservoir (item 29) and said orifices (items 27 and 28) for selectively supplying each of the orifices with moistening fluid from said reservoir; and flap sensing means (items 23-24) disposed adjacent said envelope feed path for sensing an edge portion of said envelope flap, and operatively connected to said valve means (via control circuit 36) for supplying signals to said valve means for selectively actuating said valve means to selectively supply moistening fluid to said orifices in response to the sensing of the edge portion of said envelope flap. Lupkas discloses

that the addition of these sensors and valve structures enables the gummed portion of the flap to be substantially completely moistened and eliminates the need for a nozzle to follow the intricate contour of the flap. One in the art would also immediately appreciate that switching between nozzles based on positioning of the flap would reduce moistening fluid used, by eliminating the activation of nozzles/orifices that are not adjacent to a gummed portion of the flap. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have utilized the valve and sensing means of Lupkas in the device of Gregoire in order to reduce the amount of moistening fluid used.

As to claim 26, Gregoire discloses that the plate (item 30) is substantially horizontal, and that the moistening fluid is discharged in a downward direction. The angle of 10 to 20° cited (see paragraph 0018) is considered to result in a flap position that is substantially horizontal and a spray direction that is substantially vertically downward.

As to claim 27, Gregoire discloses that the angle formed by the envelope flap and the body of the envelope to allow the plate to pass between the envelope flap and the body is approximately 30 degrees or less. Gregoire discloses an optimal range of 10 to 20 degrees, preferably 15 degrees (see paragraph 0018).

7. Claims 1-3 and 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gregoire (2003/0136337 A1) in view of Dolan (US Patent 6,193,825) and Raman (US 4,370,197).

Gregoire discloses a device for moistening an envelope flap of an envelope (for example, see figures 1-3) comprising:

- means defining an envelope feed path (the deck shown in Figure 4);

- a plate (item 18) disposed adjacent said envelope feed path, said plate being positioned such that said plate passes between said envelope flap and a body of said envelope as said envelope is transported along said envelope feed path, said envelope flap facing a firstside of the plate;

- a reservoir containing an envelope flap moistening fluid (item 34);

- a plurality of orifices (items 48) formed in said first side of said plate for discharging moistening fluid received from said reservoir.

Gregoire does not disclose valve means connected between said reservoir and said orifices for selectively supplying each of the orifices with moistening fluid from said reservoir; or flap sensing means disposed adjacent said envelope feed path for sensing an edge portion of said envelope flap, and operatively connected to said valve means for supplying signals to said valve means for selectively actuating said valve means to selectively supply moistening fluid to said orifices in response to the sensing of the edge portion of said envelope flap.

Dolan discloses a mechanism for moistening flaps using a print-head, which is a version of plate with a plurality of orifices, and which is arranged in a substantially linear array, similar to that as in Gregoire. Dolan also discloses a scanner - i.e., an linear array of sensors capable of achieving up to 300 dpi over a 4 inch area (see column 3, line 63 to column 4, line 31) - is used as the sensing means for sensing an edge portion

(i.e., gummed portion) of the flap, and operative connected to the print-head (see Figure 2) for supplying signals to the print-head for selectively activating the print-head to selectively supply moistening fluid to the orifices in response to the sensing the edge portion of the envelope flap. However, Dolan is silent as to the interior details of the print-head, such as valve structures, but discloses that they can be selectively actuated (see column 4, lines 32-48). Dolan intends for any conventional configuration of print-head to be used (see column 4, lines 49-64). Raman discloses the interior details (see Figures 1, 3, 11a, 11b, and 13) of a such conventional print-head owned by the same manufacturer of the Dolan reference and discloses a valve structure, built into the plates (the interaction between transducer 50 and chambers 30 and 32), which allows for the control of the dispensing. Dolan discloses that the benefits of using a print-head controlled by sensing means include better performance with respect to control of the amount of fluid applied, and improved firing accuracy (see column 4, line 65 to column 5, line 22) and Raman discloses that a print-head made in the described manner includes functional valves and a number of benefits, such as optimal operating and fluidic properties, substantially identical droplet size, and drop on demand capabilities (see column 5, lines 1-46). Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention to have utilized a printhead with valves as disclosed in Dolan and Raman with sensing means as disclosed in Dolan in order to achieve control over the fluid applied, improved firing accuracy, and optimal operating and fluidic properties.

As to claim 2, all of Gregoire, Dolan, and Raman disclose that the orifices are arranged in a first, substantially linear, array.

Furthermore, as to claim 3, Dolan as incorporated above discloses that the scanner includes a linear array of sensors and that these sensor means are arranged in a second, substantially linear array that is parallel to the first linear array of the sensors and is positioned adjacent to the envelope feed path and is upstream relative to the first linear array, the sensors being operative to control the printhead. Raman as applied above also discloses that the printheads have valves built in, and each valve controls a respective fluid path, each in communication with an orifice, and thus the sensors of Dolan control the valves of a conventional printhead. Furthermore, Dolan's configuration as incorporated has the plurality of sensors being in like number to the printhead, in terms of width (see figure 2, which shows that the scanner width matches the sum of the print head widths)

As to claim 5, Raman as incorporated discloses an embodiment wherein each fluid path (see Figure 11a, item 136 and 138) is in fluid communications with at least a pair of orifices.

As to claim 6, Gregoire discloses that the plate (item 30) is substantially horizontal, and that the moistening fluid is discharged in a downward direction. The angle of 10 to 20° cited (see paragraph 0018) is considered to result in a flap position that is substantially horizontal and a spray direction that is substantially vertically downward.

As to claim 7, Gregoire discloses that the angle formed by the envelope flap and the body of the envelope to allow the plate to pass between the envelope flap and the body is approximately 30 degrees or less. Gregoire discloses an optimal range of 10 to 20 degrees, preferably 15 degrees (see paragraph 0018).

8. Claims 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gregoire (2003/0136337 A1) as applied to claim 8 above (in the 35 USC 102 section above), and further in view of Dolan (US Patent 6,193,825) and Raman (US 4,370,197).

Gregoire as applied to claim 8 above disclose the means for defining an envelope flap feed path, means for moving the envelope flap, and spray moistening means.

However, Gregoire does not disclose that the spray moistening means includes a first horizontal plate, and second horizontal plate, and a circuit plate as claimed

Dolan discloses a mechanism for moistening flaps using a print-head, which is a version of plate with a plurality of orifices, and which is arranged in a substantially linear array, similar to that as in Gregoire. However, Dolan is silent as to the interior details of the print-head, such as valve structures, but discloses that they can be selectively actuated (see column 4, lines 32-48). Dolan intends for any conventional configuration of print-head to be used (see column 4, lines 49-64). Raman discloses the interior details (see Figures 1, 3, 11a, 11b, and 13) of a such conventional print-head owned by the same manufacturer of the Dolan reference and discloses a valve structure, built into the plates (for example, in the embodiment of figures 1 and 3, the interaction between

transducer 50 and chambers 30 and 32), which allows for the control of the dispensing. Raman discloses a first plate of any of items 48, 52, 56, and 54) with a plurality of first fluid channels (item 28) in fluid communication with at least a respective one of the orifices (items 64, 66, 68 and 34), a second horizontal plate (item 46) mounted on the first plate and having a plurality of second fluid channels (items 30) formed along the second plate and each in communication with at least a respective one of the orifices,, and a circuit board or plate (item 44) which includes the piezoceramic circuit or actuation element and is mounted on the second plate. Dolan discloses that the benefits of using a print-head controlled by sensing means include better performance with respect to control of the amount of fluid applied, and improved firing accuracy (see column 4, line 65 to column 5, line 22) and Raman discloses that a print-head made in the described manner includes functional valves and a number of benefits, such as optimal operating and fluidic properties, substantially identical droplet side, and drop on demand capabilities (see column 5, lines 1-46). Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention to have utilized a printhead with valves as disclosed in Dolan and Raman with sensing means as disclosed in Dolan in order to achieve control over the fluid applied, improved firing accuracy, and optimal operating and fluidic properties.

As to claim 11, all of Gregoire, Dolan and Raman discloses that the orifices should be arranged in a substantially linear array.

Allowable Subject Matter

9. Claims 16-24 are allowed.

10. The following is an examiner's statement of reasons for allowance: The prior art of, for example, Raman, does disclose a printhead which can be used as a moistening assembly comprising a number of horizontal plates (see the embodiment of Figure 1 & 3, or the embodiment of Figure 11a & 11b). Raman, for example, discloses 4 plates in Figure 1 (plates 48, 52, 56, and 54) which are analogous to the first horizontal plate with a plurality of orifices formed therethrough. Raman also discloses a diaphragm plate with electrical transducer elements (items 50). The shapes of the plates and fluid chambers formed (such as chambers 30 and 32 - see Figure 3) function as valves in conjunction with the transducer elements which are mounted in the first horizontal plate. Furthermore, Dolan discloses using a printhead as a flap moistener in conjunction with a scanner (item 80) - i.e., a plurality of sensors. Lupkas discloses using valves in conjunction with a flap moistener.

However, the prior art of record does not suggest mounting a plurality of sensors on an underside of the circuit board.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


11. Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

12. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record does not suggest that the plurality of sensors includes at least six sensors, and that the plurality of valves includes at least six valves in conjunction with the limitations of parent claim 3, which requires the plurality of sensors to be in line in number to the plurality of valves..

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George R. Koch III whose telephone number is (571) 272-1230 (TDD only). If the applicant cannot make a direct TDD-to-TDD call, the applicant can communicate by calling the Federal Relay Service at 1-866-377-8642 and giving the operator the above TDD number. The examiner can normally be reached on M-Th 10-7.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Fiorilla can be reached on (571) 272-1187. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



George R. Koch III
Patent Examiner
Art Unit 1734

GRK
September 3rd, 2004